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"LABOR OMNIA VINCIT."

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No. 20.

There is a Will, there is a Way.

BY AN OLD CONTRIBUTOR.

"Where once there's a will, there is a way,"
Believe it ye doubtful and fearful,
For the faithful and earnest, no foe can betray,
Since defeat leaves him sturdy and cheerful.

As he climbs up the steep that we read of in books,
—The mountain of science unkindly—
He finds wondrous helps in ambrosial nooks,
Where the faint-hearted stumble on blindly.

Then, if to the eyes of the world, his success
Is a matter of question and cavil,
His firm resolution, grows never the less,
With a strength that no time can unravel.

'Tis a homely old parallel, true as 'tis told,
That virtue, like trees in wild weather,
Grows strong midst the tempest, like roots in the mould,
'Gainst the elements striving together.

And if 'tis your will, from life's adverse stern road,
To conquer the meed of true merit,
Keep the land-marks in view, by which wise men have trod,
Their reward you will likewise inherit.

Committee on Examinations.

The Committee appointed by the Rev. President at the council to devise plans and suggest improvements upon the present system of examinations, met in the room of the Prefect of Studies on Friday evening, January 8, 1869. On motion, Professor W. Ivers was chosen Secretary of the committee.

I. It was *resolved* unanimously to adopt the percentage system in giving the notes for the Examination. The general use of this system throughout the country, the accuracy with which the standing of a pupil may be designated, and the facility of understanding this notation, were the principal reasons that led the committee to its adoption.

II. *Resolved*, That each Board of Examiners shall have for each class a Secretary, whose duty it shall be to keep an exact account of the number of questions answered.

III. *Resolved*, That the number of questions to be asked each pupil during the oral examination shall be ten (10). This number as a base makes the calculation of the rate per cent. a very simple operation—but it was also agreed that if this number were found either too large or too small, the substitution of some other number as a base would be accepted.

IV. *Resolved*, That all the questions be asked by the Board of Examiners exclusive of the Professor of the class. The reasons that led to this conclusion were: firstly, to make the examinations more than a class taught by each Professor in the presence of two, three, four or more others; and secondly, to make the students depend entirely on themselves, as they will expect no aid from strangers, whereas, as heretofore conducted, the Professor would naturally be inclined to throw out some hints or suggestions to enable the pupil to answer. The object of the whole is to find out what the pupils know and not to show off a class.

V. *Resolved*, That previous to the oral examination written examinations take place in all classes, and that the following plan be agreed upon:

(a) *For all Languages, Ancient and Modern.*—

1st, Previous to the time set apart for such examination the Professor of each class shall hand to the Prefect of Studies, in writing, a distinct account of the authors, and the amount of each read during the session; 2d, The Prefect of Studies will call upon a Professor of a class different from the one to be examined, and they conjointly will select from the account so handed in, different portions of one or all the authors as the Prefect of Studies will decide; 3d, On the day of examination the Professor so chosen by the Prefect of Studies shall take the place of the regu

lar Professor of the class, and shall give to the class the subjects previously selected, and the class then proceed to write the translations of such selections. The duty of the Professor shall be to see that the students neither give nor obtain aid. However, the students in foreign languages, ancient or modern, shall be allowed the use of a Dictionary if necessary.

(b) *Mathematics*.—1st, Professors of Mathematics shall conform to all regulations adopted for the government of Professors of Languages, with a slight modification of the second and the omission of the proviso to the 3rd.

The Modification of 2nd.—The Prefect of Studies shall choose a Professor different from the regular Professor of the class, and they conjointly shall either compose or collate a number of problems from authors different from the one used in class, embracing the application only of the principles seen during the session, and the solution of these problems with an explanation of the principles involved shall be written out.

(c) At the end of the time appointed for such written examination, the Professor in charge of the class shall collect all papers and hand them to the Prefect of Studies, and they at a time agreed upon shall examine and note each and every paper so handed in.

(d) *Time*.—It was agreed upon that each class should have two hours for such written examination.

1st day—Commencing with Greek, and other classes usually taught from 7½ to 8½, the Professors exchanging, examination in all the classes would proceed at the same time, and on that day no Latin or other class taught from 7½ to 9½ would be examined. Then, with same arrangement, proceed from 10 a. m. to 12 m., 1½ to 3½, and 4½ to 6½ p. m.

2nd day—Commencing at 7½ a. m. with Latin or other classes taught between 8½ and 9½, and keeping them until 9½; at 10 written examination of the classes taught from 11 to 12, keeping them until 12—and so for afternoon classes. In this way all classes will write their compositions in two days, and all or nearly all the students will be actively employed.

VI. *Resolved*. That when deemed expedient by the Prefect of Studies, written examination in primary classes may be dispensed with.

VII. *Resolved*. That there shall be five Boards of Examiners, viz.: the Classical, Scientific, Commercial, Board of Modern Languages, and English Branches.

BOARDS OF EXAMINATION.

Rev. Father Corby, S. S. C., President—General Supervisor.

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Rev. Father A. Lemonnier, S. S. C., *Presiding*.

Rev. Father D. Spillard, S. S. C., *Assistant*.

Rev. Father J. W. Ruthmann, S. S. C.

Rev. Father P. Lauth, S. S. C.

Prof. J. A. Lyons, A. M.

Prof. M. A. J. Baasen, A. M., *Secretary*.

Mr. J. O. Connell, S. S. C.

Mr. John Lauth, S. S. C.

Mr. Jacob Lauth, S. S. C.

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Prof. C. J. Lundy.

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Bro. Benjamin, S. S. C.

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Commercial Board.

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Prof. L. G. Tong, M. A., *Secretary*.

Prof. J. A. Lyons, A. M.

Prof. Wm. Ivers, A. M.

Prof. C. J. Lundy.

Prof. M. Colovin.

Board of Modern Languages.

Rev. Father A. Lemonnier, S. S. C., *Presiding*.

Rev. Father Wm. Ruthmann, S. S. C.

Rev. Father P. Lauth, S. S. C.

Prof. M. A. J. Baasen, A. M.

Prof. Wm. Ivers, A. M.

Prof. M. F. Colovin, LL. M.

Mr. Jacob Lauth, S. S. C.

Mr. John Lauth, S. S. C.

Drawing and Painting.

A special Committee on Fine Arts will exam-

ine the Drawing Classes of Professor Carl Von Weller.

Musical Department.

The Music classes, both Vocal and Instrumental, will be examined by the Faculty of Music on Saturday, 23d inst.

PROGRAMME OF THE EXAMINATION,

And Synopsis of the Matters in which the Classes will be respectively examined.

CLASSICS.

Moral Philosophy.—Dialectics and Method. Author—Manier. (Method not reviewed).

First Latin.—Quintillian—to 40th page; Juvenal—10th satire; Arnold's Prose Composition—272 pages—no review.

Second Latin.—Bullion's Grammar—the whole Grammar; Horace—Ars Poetica; Tacitus—20 chapters "De Germania"; Prosody—Cassery's—60 pages; Arnold's Prose Composition—150 pages; Latin Versification (just begun)—the commencing pages.

[This Class had only one week to review.]

Third Latin.—Four Orations of Cicero against Catiline; Arnold's Prose Latin Composition—97 pages; Bullion's Latin Grammar—280 pages; Prosody—Cassery's—24 pages.

[This Class has reviewed the first part of Cicero's First Oration against Catiline.]

Fifth Latin (4th).—Arnold's Ex.—40th in first part to Ex 20th in second part; Caesar—Book II; Virgil—Eclogues I, II, III, IV, V, VII, IX, X; Latin Grammar—Page 1-171.

Sixth Latin (5th).—Caesar—30 Chapters; Arnold's 1st and 2nd Book—60 Ex.; Grammar—20 rules of Syntax—(large print only).

Seventh Latin (6th).—Arnold's First Latin Book—45 Ex.—Reviewed 30; Historia Sacra—80 chapters—Reviewed 60; Grammar—to 4th Conjugation.

Eighth Latin (7th).—Arnold's First Latin Book—25 Ex.; Do. Grammar, to 4th Conjugation exclusively.

Second Greek Class.—Demosthenes de Corona—57 pages; Arnold's Prose Composition—46 pages.

Third Greek.—Homer—First Book—Memorabilia—3 chapters; Prose Composition—15 Ex.

Fourth Greek.—Xenophon's Anabasis—2 Books except the last chapter of Book II; 25 Ex. Arnold's First Greek Book.

Fifth Greek.—Ollendorff—page 1-94—(no re-

view); Kühner's Grammar—page 1-100—(reviewed partly); Greek Reader—First seven pages.

SCIENCES.

Mental Philosophy.—Bain's Mental Science—Books I, II. (Class opened Nov. 9th, 1868).

Logic.—Coppee—The whole treatise.

Third Rhetoric.—Quackenbos—Review—Figures and Style—Pages 225 to 234; Advance—to the end.

First Rhetoric.—Quackenbos—Review—Punctuation, etc.—pp. 74 to 162; Advance—162 to 234.

Chemistry.—General Principles—Laws of Combination—New Metallic Elements. (Silliman's Chemistry).

Physics.—General Principles—Matter, Motion, Force, Composition of Forces, Gravitation, Laws of Falling Bodies, Pendulum, Machines, Mechanical Powers, Impediments to Motion. (Part I of Silliman's Physics).

Astronomy.—Review—To Central Forces, page 128; Advance—To Planets, page 198

Geology.—Text-Book—Dana's Text-Book.

Matter studied during the first session of scholastic year of 1869: All that portion of the book comprised in the first 162 pages.

Zoology.—Text-Book—Tenney's Manual of Zoology. Matter studied during the first session of the scholastic year 1868-9—all that is comprised in the first 224 pages.

Trigonometry.—Robinson—Review—Plane Trigonometry and Spherical Geometry; Advance—Spherical Trigonometry

Analytical Geometry.—The whole treatise.

First Geometry.—Robinson—New Geometry and Trigonometry—From page 10 to 240, inclusively.

Second Geometry.—From page 9 to Fifth Book, fifth proposition (problem), inclusively.

Third Geometry.—Three Books.

First Algebra.—Robinson—University Algebra, from page 151, section 203, to page 301, section 305, inclusively.

Second Algebra.—From page 9 to page 182 in Robinson's New University Algebra.

Third Algebra.—From the beginning of the Elementary Algebra to Quadratics, inclusively.

BOOK KEEPING.

Matter gone over in Book Keeping during First Session, 1868-9—1st. Class: Two Months' Set, Simple Entries, closed by bringing balances down, and followed by a Six Months' Set, embracing the Buying and Selling Merchandise on private

account, and on account of others. Buying and selling the same on joint account; Importing and Exporting on private account, on account of others, and on account of ourselves and others, in company. Receiving and Forwarding Merchandise; the Management and Settlement of Executors' accounts; Buying, Selling, Remitting, Collecting, Discounting, Accepting and Paying Bills of Exchange; complete set of Banking, using Debit Journal, Credit Journal, Ledger, Deposit Ledger, Stock Ledger, Discount Register, Collection Register, Passed Collection Register, Tickler, Individual Liabilities, Offering and Statement Book, and having full explanation of the books of Joint Stock Companies. Steamboating, Railroading, Commercial Law: Definitions of, Contracts, Sales of Property, Stoppage in Transitu, Negotiable Paper, Agency, and Partnership.

2d Class: Text Book, page 11 to 17 inclusive, pages 33-4, and Commercial Definitions, viz: Notes, Drafts, Checks, Receipts, &c., &c. Rules for Goods Sent, Goods Received, and Special Partnership. Four sets good substantial Book-Keeping. Retailing by Double Entry, and four duties taken from Text Book, pages 39, 52, 74 and 125. Set of Steamboating.

3d Class: Same as 2d.

Senior Department.

PREPARATORY COURSE.

First English Grammar and Composition Class.—Bullion's Analytical—From page 126 to page 215; Exercises in Parsing in Parker's Aids to Composition (just begun).

Second Grammar.—Etymology and Syntax, as far as punctuation; Parsing, Analysis and "Letter-Writing."

Third Grammar.—The students of the Third Grammar Class have gone through Etymology, and reviewed; Syntax, not reviewed; they have seen parsing syntactically for three or four weeks.

Fourth Grammar.—From beginning, to page 58.

First Arithmetic.—Robinson—University Arithmetic—from page 259 to page 370 (except article on Life Insurance, 293; Sections 504 to 509 inclusive; and Articles on Problems in Interest, page 324; Sections 552 to 555 inclusively).

Second Arithmetic.—From "Percentage" (inclusive) to the end of the book—except the special rules for Partial Payments.

Third Arithmetic.—From page 84 to page 205 in Robinson's Progressive Practical Arithmetic.

Fourth Arithmetic.—Beginning to page 114.

United States History.—From page 8 to 200.

First Geography.—From page 7 to 150.

First Reading.—This Class went through the whole of the 5th Metropolitan Reader, including the first 50 pages on the Principles of Elocution.

Second Reading.—From page 10 to page 420 in the Fourth Reader.

First Orthography.—First 100 pages of Willson's Larger Speller.

Second Orthography.—From page 20 to 108.

Junior Department.

First Grammar.—All through Syntax; in Principal and Special Rules; parsing in Bullion's Progressive Exercises, sections 6 and 12.

Second Grammar.—From page 3 to page 228. In Orthography and Etymology the "fine print" was not studied; and only that portion of the "large print" suited to the capacity of the Class. In Syntax they have seen eleven "Rules," including the Special "Rules" and some of the "Remarks" under the same "Eleven Rules." Bullion's Analytical and Practical English Grammar has been used the whole session.

Third Grammar.—Studied the Etymology of "Bullion's Common School Grammar."

Fourth Class.—From page 1 to page 26 of Bullion's Common School Grammar.

ARITHMETIC.

First Class.—From page 205 to page 331, excluding the explanation of Square Root, Cube Root, and Progressions (Arithmetical and Geometrical). In Partial Payments we have used the United States Rule only. Robinson's Progressive Practical Arithmetic has been the text book.

Second Class.—May be examined from Fractions, page 86, to Percentage, page 204.

Third Class.—Addition, Subtraction, Multiplication of Integers, Common Multiple, Common Divisor, Cancellation, Fractions, to Multiplication inclusive.

Fourth Class.—Addition, Subtraction, Multiplication and Division of Integral Numbers.

REMARK.—The 4th Class had the book designated in the catalogues, but worked very few examples taken from it, as the examples were made by the Professor to suit the capacities of the students.

GEOGRAPHY.

First Class.—Definitions—Descriptive Geogra-

phy of the United States: New York, Pennsylvania, Virginia, Ohio and Louisiana. Of Europe: England, France, and Austria. Map exercises.

READING.

First Class, (Rhetorical).—Metropolitan Fifth Reader, 250 pages. Volunteers may be called on to declaim.

Second Class.—All through the Fourth Metropolitan Reading Book.

Third Class.—Through Third Metropolitan Reader.

ORTHOGRAPHY.

First Class.—All through Willson's Larger Speller and Northend's Dictation Exercises.

Second Class.—Willson's Speller, from page 1 to page 99.

Third Class.—Ditto.

CATECHISM.

First Class.—Through the book.

Second Class.—From Page 8 to page 35.

MODERN LANGUAGES.

First French.—Syntax, from p. 40 to p. 440, Fasquelle; Reading, Translation, Parsing—first two books of Télémaque.

Second French.—Grammar—Orthography and Etymology, as far as p. 95, Fasquelle; Grammatical Exercises—as far as p. 95, Fasquelle; Reading, Translation, Parsing—in De Fivas, pages 9, 10, 11, 12, 13, 77, 79, 89, 90.

Third French.—Orthography and Etymology, as far as p. 75, Fasquelle; Grammatical Ex. as far as p. 75, Fasquelle; Reading, Translation and Parsing—in De Fivas, pages 9, 10, 11, 12, 13, 17.

First German, Sen.—"Woodbury's Method," from the beginning of the book to page 171 inclusive. In "Adler's Reader" it has reviewed the stories of Gebrüder's Grimm, except the first one, as also "Der Sanger's Fluch."

Second German, Sen.—In "Woodbury," this Class began at Lesson IV, page 23, and went to Lesson XLII, page 149. In the second part of the book it commenced on page 323 with the Verb and went as far as page 388 to Compound Verbs.

In "Adler's Reader" the same Class translated from page 13 to 31. The amount reviewed in "Woodbury" is from page 29 to 87, first part; and from page 323 to 349, 2nd part. In "Adler" from page 15 to 26 has been reviewed.

Third German, Sen.—(1st div.)—This Class has

studied sixty exercises in "Ahn's Method," the first eight lessons in the reader, and in the second part of the Grammar, it has reviewed as far as the Passive Voice; except, however, the conjugation of the list of Irregular Verbs.

Third German, Sen.—(2nd div.)—This class has studied seventy exercises in "Ahn's Method"—one hundred and thirty Reading Lessons; Grammar to the end of the Verbs.

First German, Jun.—This class has seen all the large print in "Meüwsen's Grammar" as far as Syntax. Reading and Parsing may be asked in any part of "Adler's Reader."

Second German.—Grammar—Page 263 to 394; Exercises, 59 to 137; Reader, 1 to 42.

Third German, Jun.—(2nd div.)—The first forty exercises of "Ahn's New Method." Also, on the exercises for writing, in the same book.

CLASS OF ARCHITECTURE.

Text-Book.—Worthen—Studied from page 209 to 228.

Scientific Department.

No. 3.—PETROLEUM.

Etymology.—Petroleum is a word of quite recent origin, dating no farther back than the sixteenth century; it is compounded of two Latin words, *petra*, rock, and *oleum*, oil, *rock oil*. But as *petra* is not, properly speaking, a pure Latin term, it follows that the compounding of that word offends against the rule long recognized by scientists and lately formally adopted by a congress of Botanists, convened in Paris during the Universal Exposition, for the formation of scientific terms, which says that "names half of Greek and half of Latin are not allowable: *Petra* is indeed a Greek word, and does not mean simply a single rock, but a mass or ridge of rock; its corresponding term in pure Latin is *saxum*; therefore the name *saxoleum*, if use be made of the Latin language, would be more regular. Furthermore, *oleum* is pure Latin, and *elaion* is the same word in Greek: hence, if Greek be employed, *petrolæum* (the letters *a* and *s* of the gen. of *petra* are dropped according to the rule, "The vowel or vowels of the last syllable and any following letters, of the genitive form, are elided when the following word begins with a vowel;" the Greek *ai* always becomes *æ* in Latin and *e* in English) would be the correct form.

Synonymy.—In Greek, naphtha, (fr. the Arm, *nafutha*, to throw out, to exude), pittasphaltos; *Old Lat.*, liquidum bitumen, flos bituminis; *New Lat.*, petrolæum, petræleum, petræ oleum; *Germ.*, steinoel, erdoel; *Fr.* Huile de pétrole, bitume liquide, pétrole; *Engl.*, rock-oil, mineral oil, kerosene, Seneca oil; *Ital.*, petrolio.

Classification and affinities.—Petroleum belongs to the great subdivision of hydrocarbon compounds, to the class of simple hydrocarbons and to the Naphtha group, of which there are about ten species (including those of the Beta-naphtha group). These species constitute all the lighter and more liquid kinds of petroleum. The Pittolium and Paraffin groups are closely allied to the preceding groups; indeed they differ from them only in their greater degree of density or viscosity. Consequently Petroleum passes insensibly into *pittasphalt*—a viscid semi fluid bitumen, otherwise called *maltha*, or pitch; *pittasphalt*, into *paraffins*—bituminous matter resembling wax and of semi-liquid consistence—and the latter as insensibly into asphaltum or solid bitumen. All these closely connected mineral hydrocarbon groups are highly inflammable, whether in liquid, semi fluid or solid forms, and possess almost identical properties. We must also remark here that mineral oils are quite similar in composition and properties to those obtained from coal or wood, and known as coal and pyroligneous oils.

Description.—Petroleum, as found in nature, oozing up from underneath cavities, spontaneously or by means of artificial wells, is of no definite composition, but it always consists of various hydrocarbon oils which hold in solution bitumen in a more or less solid form. When it exudes from the earth, or is collected on the surface of water, petroleum is semi-liquid and somewhat tenacious; but if it remains exposed to the atmosphere, it becomes liable to the effects of heat and winds—and, as a consequence, the lighter oils evaporate, leaving only the heavier; this causes it to become inspissated, and even to thicken hard. In this condition, it becomes also oxygenized; that is, it absorbs oxygen and forms a union with it, and by this process it loses a part of its hydrogen. It is of a fetid, disagreeable odor; taste, acrid or bitter; semi-transparent; color, dark or brownish, sometimes presenting a greenish hue. The lighter petroleum is, the more naphtha of course is obtained, and therefore the more valuable it is. The specific gravity of the lightest varieties of petroleum averages 40° in Baumé's Hydrometer. The above

are the characters of the crude article of commerce—the unrefined Petroleum. The Rock Oil of domestic use is properly called Naphtha; it is distilled Petroleum in its purest, thinnest and lightest state. As such, it is a limpid, colorless, or but slightly yellowish fluid, insoluble in water and lighter than it; tasteless; slightly bituminous odor; soluble in proof alcohol and only partially so in ether; dissolves all fixed oils, sulphur, gums, resins, etc. Specific gravity 60 to .75; boiling T. 150°; formula $C H_4$ —or Carbon 84, Hydrogen 16.

Localities where found.—The United States produces perhaps a greater quantity and a better quality of Petroleum than other country in the world. The oil bearing regions of the Cumberland, Kenawha and Alleghany valleys, for instance, are extremely productive; and such is the purity, the lightness, of the American article that it generally yields from 60 to 80 per cent. of pure oil or naphtha. The most abundant localities in this country are Titusville, Oil Creek and Franklin, in Venango Co., where the wells are counted by the thousand, and the gallons of annual yield by the millions; Tidioute, in Warren Co., Pa.; Salines, of the Little Kenawha, West Virginia; Seneca Lake, where large quantities of oil is found on the surface of the water; Fredonia, O., where it naturally exudes on the surface of the earth, in the form of vapor. Petroleum is also found most abundantly in several places of the Apcheron peninsula, on the western shore of the Caspian Sea, and other places of southeastern Russia; in western Persia, and in the Burmese Empire, especially along the banks of the Irrawaddi. In this country, Petroleum is generally obtained with much expense and labor, as it is necessary to bore wells several hundreds of feet in depth, mostly through pretty hard rocks such as the Corniferous and Blue Limestones, Devocian Sandstones, Black Shale and Genesee Slate; but still this branch of industry is, in most instances, highly remunerative, as the many enormous fortunes thus accumulated amply testify. In Asia, on the contrary, Petroleum is procured in vast quantities at an insignificant expense, and with very little labor; but it is of a very inferior quality, being quite heavy and consequently largely bituminous. In those countries, Petroleum rises spontaneously above the surface of the earth in a gaseous state, and is then received in large excavations or wells, 12 or 15 feet deep, where it is allowed to partly vaporate and harden. On the coast of Venezuela, South America, there is a remarkable

island called Trinidad (Trinity), where a variety of Petroleum oozes out from unknown depths in such great abundance as to form a lake three miles in circumference—partly liquid and partly solid.

Uses.—The American petroleum generally passes through a process of distillation, called "Refining." The first oils thus produced are extremely light and pure, and are often called benzole,—used for cleaning soiled leather goods and textile fabrics, and for other purposes, especially where substances possessing great solvent powers are required. The next light and nearly colorless oils—naphtha or kerosene oils—serve for illumination and for a substitute of linseed oil in oil-paints. Naphtha is also employed by chemists for preserving the metallic bases, potassium and sodium, from oxydation; and the residuum or heavier oils are of comparatively little value, yet when mixed with vegetable or animal oils, are extensively used for lubricating machinery. "New York Petroleum; or Seneca Oil, is used externally," says Dunglison, in "chilblains, chronic rheumatism, affections of the joints and skin, and acts as a disinfectant and parasiticide." The mineral pitch of Trinidad Island is used for breaming the bottom of ships. The Persians, Georgians and Birmese use their crude Petroleum for fuel (when mixed with a little earth or ashes), and light.

History—Petroleum was certainly known to the ancient Greeks and Romans. The historian Herodotus, who lived two thousand years before Christ, mentions it as existing in one of the Ionian islands (Xante); Dioscorides, and after him Pliny and Tacitus, says that the Sicilians in the vicinity of Agrigente used a "liquid bitumen" in their lamps instead of oil. Vitruvius states that the Egyptians employed Petroleum in embalming their dead. It is also well known that the Genoese and the inhabitants of the province of Parma used the bituminous oil more than two hundred years ago for various purposes; the former employed it, especially, for illuminating their city. As long ago, at least, the early settlers of the State of New York noticed the occurrence of Petroleum oozing out of the earth, or floating on the waters of rivers and lakes, especially in Seneca Lake, in Allegheny county, New York. They and their neighbors, the Seneca Indians, used to collect it and sell it for medicinal purposes. In 1833 Professor Silliman described the Seneca Oil Spring as "a dirty pool about eighteen feet across, covered with a film of oil which was skimmed off, from time to time, by means of blank-

ets." In 1844 a flowing well at Burkesville, in Kentucky, was struck, but it soon failed. However correctly were the sources of supply pointed out, and the means of purifying and utilizing it known, more than forty years ago, yet it was not before the year 1859 that a serious attention was called to this new source of wealth, and its importance duly appreciated. On the 26th of August of that year, on Oil Creek, Venango county, Pennsylvania, oil was unexpectedly struck at a depth of seventy five feet, while Col. Drake was engaged in boring for salt. Since that day the excitement produced all over the country by the first *spouting* well of oil in that now famous oil-region has gone on the increase year after year, and remains at the present day unabated—saving fortunate oil seeking adventurers from poverty or pecuniary embarrassments, or throwing the unsuccessful oil-well borers into destitution or bankruptcy.

Origin—The origin of Petroleum is not yet fully demonstrated; some geologists (Bischof, Lesquereux, etc.), attribute it to the decomposition of vegetable substances alone; others, to animal substances, (Newberry, Peckham); but the most generally admitted opinion (Dana, Dufresnoy, Hunt, etc.) at the present time is that Petroleum comes partly from vegetable and partly from animal substances, mainly fishes, and other non nitrogenous aquatic animals of the former, and fucus and other marine plants of the latter. But as the rocks in which the cavities exist are generally *barren* sandstones or sandy shales (as is the case in Western Pennsylvania) it is probable that the oil ascended from subjacent *fertile* rocks in form of vapor and condensed in those cavities.

J. C. Carter

A Copy of the *Sch. lastic Year*, a neat little paper published weekly at Notre Dame, Indiana, and devoted to the interests of the students of the University at that place, has been handed to us. This number contains the announcement of the law department of that institution, which is to be opened on the 1st of February, and also the prospectus of its faculty. The course, which is quite similar to that of our own law department, is to be completed in two years, of four terms each. We are glad to see that students presenting themselves for matriculation in the new school will be expected to have a liberal education. This, we believe, is not even *expected* of those who enter the law department of this University—the sole requisite of admission being that

the candidate shall be eighteen years of age, and have a certificate of good moral character. He is not even required to know how to spell his own name. Owing to this want of any entering examination, a good many enter the law school here each year who would much better grace the benches of some district school. Their admission we consider an injustice to the great majority of the law students, who are intelligent men, and are here to learn something of the law. We are glad to see that something in the way of education is even *expected* of those who enter the law department at Notre Dame.—*University Chronicle, University of Michigan, Jan. 16.*

THE students who intend to study extra branches during the second session should get provided with a permission to that effect from their parents.

A Class of Hebrew will commence early in February.

A Class of Italian will be taught as soon as a sufficient number of students apply for it.

A special course of Rhetoric will be opened for the benefit of the students who belong to the highest classes.

The results of the written and oral Examinations, promotion in the various Classes, etc., will be published in our next numbers.

SAINT MARY'S ACADEMY.

SAINT MARY'S, Jan. 19th, 1869.

Arrivals.

Jan. 13th.—Miss Julia Burns, Lacon, Illinois;
Jan. 15th.—Miss Emma Livingston, Kankakee, Illinois.

Table of Honor, Sr.

Misses L. Leoni, E. Howard, L. Lewis, M. Alexander, K. Young, M. Kirwin, E. Kirwin, J. Davis, N. Burridge, A. Matthews, M. King, M. Shirland.

Honorable Mention.

Graduating Class.—Misses L. and L. Tong, K. Livingston, A. Ewing, E. Crouch, K. Cunnea, J. Hines.

First Senior.—Misses A. Cunnea, O. Brady, M. Morrill, J. Dobson, F. Grimes, M. Claffey, E. Ew-

ing, A. Darcy, M. Carraher, L. McManaman, C. Davenport.

Second Senior.—Misses E. Bland, R. Rettig, C. Foote, E. Lindsay, L. English, A. Carpenter, N. Sherburn, N. Thompson, K. Carpenter, A. Walker, K. Armstrong, L. Chamberlain, E. Smith, H. Higgins.

Third Senior.—Misses A. Boyles, E. Ruger, R. Joslin, M. Dillon, U. Gill.

First Preparatory.—Misses A. Maste, S. O'Brien, A. Lyons, M. Foote, R. Rumely, E. Darst, S. Coffey, E. Henry, E. Lonergan.

Second.—Misses P. Smith, E. Simms, K. Kline, M. Minor.

Third.—Misses C. Hoerber, M. Clune, M. Coffey, A. Dingers, E. Seiler.

FRENCH.

First Class.—Misses A. Carmody, L. and L. Tong.

Second Class.—Misses M. Shirland, K. Carpenter, M. Alexander, K. Young.

Instrumental Music.

PIANO.

First Class.—Miss C. Foote.

Second Class.—Miss N. Thompson.

Third Class.—Miss L. English.

Fourth Class.—Miss H. Niel.

Fifth Class.—Miss C. Letourneau.

Sixth Class.—Miss A. Boyles.

Seventh Class.—Misses M. and E. McNamara.

VOCAL MUSIC.

Misses C. Davenport, L. Corning, R. Rettig.

Table of Honor, Jr.

Misses M. Letourneau, R. Leoni, B. Meyers, J. Wilder, M. O'Mara, B. Frensdorf, A. Garrity, A. Byrne, A. Longley, M. Gildersleeve.

Honorable Mention.

First Preparatory.—Misses A. McKenney, and A. Dunlap.

Second.—Miss L. Jones.

Third.—Misses A. Metzger, A. Robson.

First Class, Jr.—Misses M. and L. McNamara, L. Thomson, F. Taylor, M. Roberts, M. Moon, M. Nash.

Second Class, Jr.—Misses A. Strieby, R. Canoll, A. Garrity, A. Decamp, M. Runolds.